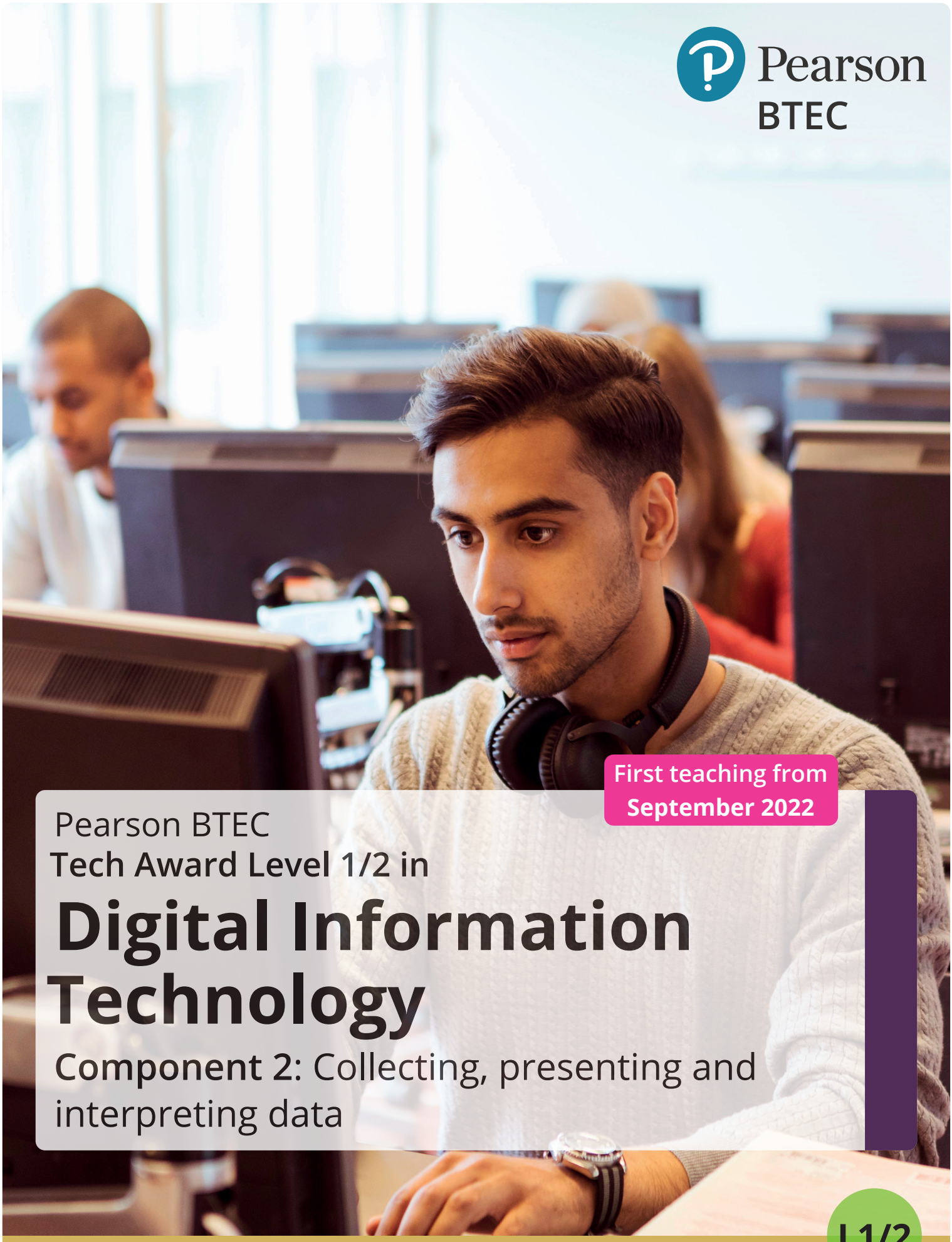

First teaching from September 2022

Pearson BTEC

Tech Award Level 1/2 in

Digital Information Technology

Component 2: Collecting, presenting and interpreting data

L1/2

Pearson-set Assignment – sample

First teaching from September 2022

Issue 2

Pearson
BTEC Level 1/Level 2 Tech Award in Digital Information Technology

Pearson-set Assignment – Sample

Component 2: Collecting, Presenting and Interpreting Data

First teaching September 2022

Issue 2

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This Pearson-set Assignment is Issue 2. We will inform centres of any changes to this issue. The latest issue can be found on our website.

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Publication code VQ000044

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Summary of Pearson BTEC Level 1/Level 2 Tech Award Digital Information Technology Pearson-set Assignment for Component 2: Collecting, Presenting and Interpreting Data Issue 2 changes

Summary of changes made between the previous issue and this current issue	Page number
The wording in the *Introduction* section under Formal supervision and in the *Instructions to learners* section has been amended to clarify that learners can access their own course notes.	Pages 1 and 2
The wording in the *Guidance for teachers* section under During the assignment has been amended to clarify that any sources of information, ideas, text, audio and/or visual assets created by others that learners include in their work must be clearly identified and referenced. And that only permitted materials, such as learners' own course notes can be brought into the supervised assessment.	Pages 9 and 10

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Introduction

The key purpose of this assessment is for learners to develop their knowledge and understanding of characteristics of data and information.

The assignment for this component consists of three tasks.

- In response to Task 1, learners will explore the suitability of two given data collection methods used by an organisation for a given dataset.
- In response to Task 2, learners will carry out different manipulation and processing methods in order to create a dashboard, providing data summaries using appropriate presentation methods and features.
- In response to Task 3, learners will analyse a dataset, present their findings and draw conclusions based on these findings. They will explore how presentation affects understanding in the dataset and how this could be improved.

This assessment will be offered twice a year. The timing of the assessment is approximately 6 hours of supervised assessment.

The assessment evidence is produced under formal supervision to ensure that learners' work is authentic and that all learners have had the same assessment opportunity. The formal supervision takes place in a session/s timetabled by the centre.

Levels of control within this set assignment

The levels of control outlined below must be adhered to and enforced by teachers following the release of the assignment to learners.

Formal supervision: The estimated hours stated for completion of each task in this set assignment refer to formally supervised hours. During formally supervised sessions, learners must work independently, cannot have access to the internet, cannot work with or discuss their work with other learners unless group or collaborative work is required or permitted. Work must be held securely in between supervised sessions and must not be taken in or out of sessions. Learners will be able to access their own course notes and any materials specified in the assessment.

Instructions to learners

You should read the information given in the vocational context and each task section of this assignment carefully prior to starting work. Tasks often link to one another, so it is important to make sure you understand all tasks before starting the assignment.

The assignment will take approximately 6 supervised hours to complete.

This is divided into approximately:

- 1 hour to complete Task 1
- 2.5 hours to complete Task 2
- 2.5 hours to complete Task 3

These timings are for guidance only, but should be used as an indication of how long to spend on each task. Your teacher will advise you when it is time to move from one task to the next.

You must work independently and should not share your work with other learners. All work must be your own and you must sign a declaration of authenticity to confirm this. If group work or collaboration is permitted, you must produce your own independent responses and evidence for the tasks.

Any sources of information, ideas, text, audio and/or visual assets created by others that you include in your work **must** be clearly identified and referenced. Using the work of others as your own or without proper acknowledgement is considered plagiarism and can result in disqualification from the assessment.

You may ask your teacher for support if you have questions about the requirements of tasks, what evidence you need to produce and any resources you are allowed to access, such as your own course notes. They cannot give you feedback about how to improve your work, or guide you to solutions to any questions or problems in the tasks.

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Pearson-set Assignment

Qualification	Pearson BTEC Level 1/Level 2 Tech Award in Digital Information Technology
Component number and title	**2:** Collecting, Presenting and Interpreting Data
Write your name here (Surname, Name)	
Completion time for assignment	Approximately 6 hours
Submission deadline	
Assessment series and year	Sample assignment

Vocational context	Many organisations collect data to help them improve their products or services. Data can be collected from a range of sources. Once collected, the data needs to be collated and analysed to allow it to become useful. Your job is to collate the data, perform some analysis and present it in such a way that it can be understood by others.

Task 1	**Data collection methods** A manager of a medical centre needs to ensure that all patients receive the best service and care possible. To help the manager determine this, data has been collected using two different data collection methods and collated into one dataset. **Medical centre dataset** The data has been collected using these data collection methods: • the centre's booking system database • a social media survey set by the medical centre. The manager of the medical centre has calculated that only 50% of the patients who were sent a survey responded. The ratings are on a scale of 1 to 10, 1 being the lowest and 10 being the highest. Produce a report on the suitability of the data collection methods used by the medical centre.

	Your report should include: • the strengths and weaknesses of the given data collection methods • how the features of data collection affect the reliability of the data • the factors that might affect the quality of the data • ways that the collection of data could be improved • possible threats to patients who have data stored about them.
Learning outcome covered	**A:** Understand how data is collected and used by organisations and its impact on individuals
Checklist of evidence required	A word-processed report.
Resources needed	Medical centre dataset.csv
Supervised hours to complete the tasks	Learners would need approximately 1 hour to complete Task 1.
Number of marks	12 marks

Task 2	**Use data manipulation methods** You have been provided with two files: • Medical centre dataset.csv • Analysis and Dashboard.xls The Analysis and Dashboard spreadsheet includes three worksheets. You will need to use these worksheets for different tasks. **Task 2a** • Import the Medical centre dataset to the Imported Dataset worksheet of the Analysis and Dashboard spreadsheet file. • Format the worksheet to highlight headings and to ensure the spreadsheet is appropriate for other viewers. • Add a column to the right of the 'Check in Method Score 2020' column. • The column will show the Check in Method feedback – add an appropriate column heading. • Use a FUNCTION to display the relevant feedback in the new column you added. You will need to use the score and feedback table from the 'Analysis' worksheet. • Replicate this FUNCTION to all other rows in the column. • Cells where feedback is shown as Excellent need to stand out. Use an appropriate formatting technique to make it stand out and to automatically update if the feedback were to change.

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	Task 2b The 'Analysis' worksheet needs to be completed. You need to use appropriate FUNCTIONS to calculate the: • average rating for each doctor over the three-year period • minimum rating for each doctor over the three-year period • total number of patients. The Check in score needs to have an Action comment added. If the score is less than 4, add the comment to the 'Monitor' system. If it is not, then the comment must be 'No action'. You need to use an appropriate FUNCTION to do this. The Check in score has been given a starting score of 1. You must add a suitable form control to this cell to allow a user to change the values (1–5) and see the Action comment for each value. The form control needs to restrict the values from 1 to 5. You need to use a FUNCTION to show the number of patients who provided the different check in scores. Once you have done this, use a formula to display the percentage of each score. **Task 2c** **Create a dashboard** Create a dashboard to present the extra column you added in the dataset and the work you have carried out on the 'Analysis' worksheet so it can be more easily understood by others. You need to use a range of appropriate presentation techniques to display the information in the 'Dashboard' worksheet, such as: • tables • pivot tables • sparklines • graphs/charts, including dynamic charts/graphs.
Learning outcomes covered	**A**: Understand how data is collected and used by organisations and its impact on individuals **B:** Be able to create a dashboard using data manipulation tools
Checklist of evidence required	Completed spreadsheet – Analysis and Dashboard.xls
Resources needed	Medical centre dataset.csv Analysis and Dashboard.xls

Supervised hours to complete the tasks	Learners would need approximately 2.5 hours to complete Task 2.
Number of marks	24 marks

Task 3	You have been given a new dataset for other employees within the medical centre organisation. The dataset includes data for each employee: • the year the employee started at the company • the department where they work • the annual salary earned from 2016 (or the year they started) to 2019 • whether or not the employee works overtime • the employee satisfaction rating • the rise in salary for the years worked. The dashboard includes charts, a table and a pivot table with corresponding chart. **Task 3a** **Effectiveness of the dashboard** Use the given dataset and dashboard to find: • trends • patterns • errors. Present your findings in a report and include any conclusions you can make based on these findings. Your report should include annotated screenshots from the dataset and dashboard to emphasise your findings and conclusions. **Task 3b** **How presentation affects understanding** Produce a report on the use of presentation methods and features used in the dataset and dashboard to display the summaries and information and how they could be improved to ensure that: • information is not misinterpreted • information is not biased • inaccurate conclusions are not made. Your report should include annotated screenshots to enhance any information you provide.
Learning outcomes covered	**A:** Understand how data is collected and used by organisations and its impact on individuals **C:** Be able to draw conclusions and review data presentation methods and features

Checklist of evidence required	A word-processed report with annotated screenshots.
Resources needed	Medical company employee dataset.xls
Supervised hours to complete the tasks	Learners would need approximately 2.5 hours to complete Task 3.
Number of marks	24 marks

Guidance for teachers

(to be removed before assignment distribution to learners)

General guidance	This assignment has been designed to allow learners to meet the assessment requirements of the component by engaging in vocationally relevant tasks and activities. You must issue this assignment allowing sufficient time for learners to complete it. You should advise learners of the timetabled sessions during which they should complete monitored preparation and when they will undertake supervised assessment. You should direct learners to read the information given in the vocational context and each task section of this assignment carefully. Tasks often link to one another, so it is important to check that learners understand all tasks before they start the assignment.
Specific guidance	The assignment will take approximately 6 supervised hours to complete. This is divided into approximately: • 1 hour to complete Task 1 • 2.5 hours to complete Task 2 • 2.5 hours to complete Task 3. These timings are for guidance only, but should be used to give learners an indication of how long to spend on each task and to schedule your assessment sessions. Tasks can be conducted and evidence can be produced across several sessions. The timings provided do not include any time required for taking photographs and importing images. **Submission of evidence for moderation** Evidence submitted for moderation should include a clearly labelled digital folder per learner containing: • all work completed for the assignment • a completed declaration of authenticity. **Guidance on preparing evidence for submission** • Consideration should be given to the quality and clarity of images/scans, audio and/or video submitted as evidence. Images included should be of sufficient size to clearly show the quality/nature of the work being demonstrated. • Digital files should be saved in an accessible format that does not require specialist software to access.

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Opportunity to contextualise this assignment	No contextualisation is allowed for this assignment. You must not change any aspect of the vocational context or tasks. The set of tasks form a coherent whole, addressing all the learning outcomes and allowing access to the full range of marks. Altering any aspect of this assignment may constitute malpractice and will be subject to investigation by Pearson.
Before carrying out the assignment	Before this assignment is given to learners, they must undertake a learning programme covering the knowledge, understanding and skills outlined in the component content in the specification. They should be given sufficient time to develop their knowledge, understanding and skills in order to achieve their full potential.

During the assignment	**For the duration of the assignment:**
	• all work must be completed independently by the learner under appropriate monitoring and supervision to ensure authenticity
	• work must be produced in response to the assignment and no work completed during teaching can be used or adapted for this purpose
	• guidance or support can only be given to learners in order to clarify:
	  ○ the requirements of tasks
	  ○ the evidence they need to produce
	  ○ any resources they are allowed to access.
	• learners cannot receive any guidance or instruction about how to improve work to meet mark bands or solutions to questions or problems in the tasks
	• learners must not be given any support or feedback in writing or editing notes
	• learners must not be provided with writing frames, prepared formats, templates or any other forms of scaffolding
	• any permitted group or collaborative work must be clearly defined
	• any sources of information, ideas, text, audio and/or visual assets created by others that learners include in their work must be clearly identified and referenced
	• appropriate steps must be taken to prevent plagiarism and/or collusion through supervision and regular checks of work as it develops.

	Maintaining security during formal supervision Any work learners produce under supervision must be kept securely between sessions and during breaks. Designated assessment areas must only be accessible to the learner and to named members of staff. Learners can only have access to their work under supervision. Only permitted materials, such as learners' own course notes, can be brought into the supervised assessment and no materials should be removed. Learners are not permitted to have access to the internet or other resources that might compromise the security of the assessment.
Approach to teaching and learning to support learners to *'get it right first time'*	In order to fully prepare learners, before the Set Assignment is distributed, they should: • attempt formative assessment tasks that model important elements of the activities to be carried out in this assignment • receive feedback on how they performed including what they did well and how they can further improve.
Other materials	This Set Assignment does not include any additional materials and it is expected that learners produce their own evidence. Learners must not be provided with writing frames, prepared formats, templates or any other forms of scaffolding.

Assessor guidance

Your role as the assessor	As the assessor of this internal assessment, it is your role to: • ensure correct processes to maintain security and authenticity are followed for the duration of the assessment • make and record assessment decisions using the mark bands • provide feedback to learners about their achievement. When acting in dual roles as both teacher and an assessor, you should help learners to understand your responsibilities in each capacity so they are aware of the differences during learning and assessment.
Your assessment decision	You must assess learners' evidence for this Pearson-set Assignment using the marking grids for the relevant component provided in this document. Marking grids have four mark bands, each containing the descriptors specifying the level of knowledge, understanding and skills that learners are required to demonstrate to be awarded the marks associated with that band. The descriptors for each band are written to reflect the marks at the top of the mark band and the descriptors should be read and applied as a whole. A glossary of terms used in the marking grids is provided in *Appendix 1* of the specification. **Using a 'best fit approach' to marking the assignments** In applying the marking grid, assessors are required to: • first make a holistic judgement on which mark band most closely matches the learner's response for the evidence being assessed. Each mark band contains a number of 'bulleted traits' that in combination provides a descriptor of the expected performance of a learner in relation to the individual task within the assignment. Consideration should also be given to the descriptors in the mark bands above and below to ensure the correct mark band is selected. The learner's response does not have to meet all the characteristics of a mark band's descriptor before being placed in that mark band, as long as it meets more of the characteristics of that mark band than of any other. • after placing the learner's response within a mark band, the Assessor should then make a more refined judgement as to whether the learner's response is towards the higher, or the lower end of the mark range for that mark band, and allocate a final mark accordingly within the marks available in that mark band.

	Further guidance on deciding a final mark The award of marks must be directly related to the descriptors in a mark band. assessors should be prepared to use the full range of marks available. When deciding upon a final mark, assessors should take into account how well the learner's response meets the requirements of the descriptor in that mark band. • If the learner's response meets the requirements of the descriptor fully, assessors should be prepared to award full marks within the mark band. The top mark in the mark band is used for a learner's response that is as good as can realistically be expected in that mark band. • If the learner's response only barely meets the requirements of the descriptor (but is better than the previous descriptor), assessors should consider awarding marks at the bottom of the mark band. The bottom mark in the mark band is used for a learner's response that is the weakest that can be expected in that mark band. • The middle marks of the mark band are for a learner's response that is a reasonable match to the descriptor. This might represent a balance between some characteristics of the descriptor that are fully met and others that are only barely met. • Where there is no evidence worthy of credit, no marks (0 marks) must be awarded.

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Marking grid – Component 2

Mark Band 0	Mark Band 1	Mark Band 2	Mark Band 3	Mark Band 4
Task 1: Data collection methods **Learning outcome A: Understand how data is collected and used by organisations and its impact on individuals**				
0 marks	**1 – 3 marks**	**4 – 6 marks**	**7 – 9 marks**	**10 – 12 marks**
No rewardable material	**Limited** application of knowledge and understanding of how data is collected and used by organisations and its impact on individuals. Evidenced through: • a **superficial** account of the impact of the data • **superficial** lines of reasoning with few lines of logic and relation to the context of the scenario • **few** appropriate suggestions to the context of the scenario.	**Adequate** application of knowledge and understanding of how data is collected and used by organisations and its impact on individuals. Evidenced through: • a **partially** developed and partially appropriate account of the impact of the data • lines of reasoning that are **partially** appropriate with some lines of logic and relation to the context of the scenario • **some** appropriate suggestions to the context of the scenario.	**Good** application of knowledge and understanding of how data is collected and used by organisations and its impact on individuals. Evidenced through: • a **mostly** developed and mostly appropriate account of the impact of the data • lines of reasoning that are **mostly** appropriate and **mostly** logical and related to the context of the scenario • **mostly** appropriate suggestions to the context of the scenario.	**Comprehensive** application of knowledge and understanding of how data is collected and used by organisations and its impact on individuals. Evidenced through: • a **well-developed** and fully appropriate account of the impact of the data • lines of reasoning that are **fully** appropriate and logical and related to the context of the scenario • **fully** appropriate suggestions to the context of the scenario.

Mark Band 0	Mark Band 1	Mark Band 2	Mark Band 3	Mark Band 4
Tasks 2a and 2b: Use data manipulation methods **Learning outcome A: Understand how data is collected and used by organisations and its impact on individuals** **Learning outcome B: Be able to create a dashboard using data manipulation tools**				
0 marks	**1 – 3 marks**	**4 – 6 marks**	**7 – 9 marks**	**10 – 12 marks**
No rewardable material	**Limited** application of relevant data manipulation and processing methods. Evidenced through: • **basic** use of the required data manipulation and data processing methods • **mostly inaccurate** results produced from the manipulation and processing of data.	**Adequate** application of relevant data manipulation and processing methods. Evidenced through: • **partially** appropriate use of the required data manipulation and data processing methods • **partially accurate** results produced from the manipulation and processing of data.	**Good** application of relevant data manipulation and processing methods. Evidenced through: • **mostly** appropriate use of the required data manipulation, advanced data manipulation and data processing methods • **mostly accurate** results produced from the manipulation and processing of data.	**Comprehensive** application of relevant data manipulation and processing methods. Evidenced through: • **fully** appropriate use of the required data manipulation, advanced data manipulation and data processing methods • **accurate** results produced from the manipulation and processing of data.

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Mark Band 0	Mark Band 1	Mark Band 2	Mark Band 3	Mark Band 4
Task 2c: Create a dashboard **Learning outcome A: Understand how data is collected and used by organisations and its impact on individuals** **Learning outcome B: Be able to create a dashboard using data manipulation tools**				
0 marks	**1 – 3 marks**	**4 – 6 marks**	**7 – 9 marks**	**10 – 12 marks**
No rewardable material	**Limited** application of relevant presentation methods and features. Evidenced through: • **superficial** data summaries used showing mostly inaccurate results • **basic** use of a **narrow** range of the presentation methods • **basic** use of a narrow range of presentation features.	**Adequate** application of relevant presentation methods and features. Evidenced through: • **partially** appropriate data summaries used showing partially accurate results • **partially** appropriate use of a **reasonable** range of the presentation methods • **partially** appropriate use of a reasonable range of presentation features.	**Good** application of relevant presentation methods and features. Evidenced through: • **mostly** appropriate data summaries used showing mostly accurate results • **mostly** appropriate use of a **range** of presentation methods • **mostly** appropriate use of a range of the presentation features.	**Comprehensive** application of relevant presentation methods and features. Evidenced through: • **fully** appropriate data summaries used showing accurate results • **fully** appropriate use of a **wide** range of presentation methods • **fully** appropriate use of a **wide** range of presentation features.

Mark Band 0	Mark Band 1	Mark Band 2	Mark Band 3	Mark Band 4
Task 3a: Effectiveness of the dashboard **Learning outcome A: Understand how data is collected and used by organisations and its impact on individuals** **Learning outcome C: Be able to draw conclusions and review data presentation methods**				
0 marks	**1 – 3 marks**	**4 – 6 marks**	**7 – 9 marks**	**10 – 12 marks**
No rewardable material	**Limited** application of knowledge and understanding to find trends, patterns and errors. Evidenced through: • a **superficial** set of findings provided from the dashboard. **Limited** justification of conclusions drawn. Evidenced through: • conclusions with lines of reasoning that have **little** relevance to the context of the scenario.	**Adequate** application of knowledge and understanding to find trends, patterns and errors. Evidenced through: • a **partially** complete and appropriate set of findings provided from the dashboard. **Adequate** justification of conclusions drawn. Evidenced through: • conclusions with lines of reasoning that are **partially** relevant to the context of the scenario.	**Good** application of knowledge and understanding to find trends, patterns and errors. Evidenced through: • a **mostly** complete and appropriate set of findings provided from the dataset and dashboard. **Good** justification of conclusions drawn. Evidenced through: • conclusions with lines of reasoning that are **mostly** relevant to the context of the scenario.	**Comprehensive** application of knowledge and understanding to find trends, patterns and errors. Evidenced through: • a **fully** complete and appropriate set of findings provided from the dataset and dashboard. **Comprehensive** justification of conclusions drawn. Evidenced through: • conclusions with lines of reasoning that are **fully** relevant to the context of the scenario.

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Mark Band 0	Mark Band 1	Mark Band 2	Mark Band 3	Mark Band 4
Task 3b: How presentation affects understanding **Learning outcome A: Understand how data is collected and used by organisations and its impact on individuals** **Learning outcome C: Be able to draw conclusions and review data presentation methods**				
0 marks	**1 – 3 marks**	**4 – 6 marks**	**7 – 9 marks**	**10 – 12 marks**
No rewardable material	**Limited** justification of the presentation features used to display the summaries and information. Evidenced through: • **simplistic** lines of reasoning on the use of presentation features • **simplistic** lines of reasoning on how the presentation features used affect the understanding of the information provided.	**Adequate** justification of the presentation features used to display the summaries and information. Evidenced through: • **partially** developed lines of reasoning on the use of presentation features • **partially** developed lines of reasoning on how the presentation features used affect the understanding of the information provided.	**Good** justification of the presentation features used to display the summaries and information. Evidenced through: • **mostly well**-developed lines of reasoning on the use of presentation features • **mostly well**-developed lines of reasoning on how the presentation features used affect the understanding of the information provided.	**Comprehensive** justification of the presentation features used to display the summaries and information. Evidenced through: • **well**-developed lines of reasoning on the use of presentation features • **well**-developed lines of reasoning on how the presentation features used affect the understanding of the information provided.

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VAT Reg No GB 278 537121

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Publication code:
VQ000044